
U.S. TRADE AND DEVELOPMENT AGENCY



EXECUTIVE SUMMARY

CONSTANZA, ROMANIA TO TRIESTE, ITALY OIL PIPELINE

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PROJECT REFERENCE DOCUMENTS***1. Executive Summary*****1.1 Conclusions – Technical Feasibility**

The Constantza to Trieste Pipeline (CTPL) is technically feasible. The pipeline should be relatively easy to construct because there are no major natural obstacles. The pipeline route crosses the Danube River twice and traverses two minor mountainous areas, but the terrain and crossings are well within the current capability of pipeline construction contractors. Likewise, required pipe sizes and pumping station sizes are within the conventional range of international pipeline construction projects. Figure 1-1. 1 illustrates the CTPL System routing.

The route was selected to avoid populated areas, where possible. To the extent practical, the route parallels existing infrastructure (roads, railroads, and power lines), providing minimum interference with current land use. Routing is through countries with stable and growing economies which should provide long-term security. In the next stage of project development a more site specific routing will be identified for rights-of-way acquisition.

None of the port modifications present unusual technical challenges.

There will be an excess of crude oil supplies from the developing Caspian Region when compared to the pipeline capacity. This crude is superior to most of the crude oil currently refined in Eastern and Central Europe because it is lighter and has a lower sulfur content.

1.2 Conclusions - Financial Feasibility

The CTPL is financially feasible because it can transport crude oil to a growing market at a competitive tariff, at the same time providing investors a reasonable rate of return. It has the added advantage of connecting to the existing ADRIA pipeline in Southern Hungary, thereby providing access to refineries in Northern Hungary, Slovakia, and The Czech Republic. At Trieste, Italy the CTPL connects to the TransAlpine Pipeline (TAL), thereby providing access to refineries in Germany and Austria. CTPL will have a stable and growing market in Eastern and Central Europe, with the possibility of markets beyond Europe.

To be financially feasible to owners and investors a project must provide sufficient revenue to pay its operating expenses, service its debt, and provide a reasonable return to its owners. To be commercially viable a pipeline project must be able to deliver transported volumes at a tariff that is

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competitive with other sources of supply. This study defines the volumes to be transported by assessing the potential market, sizing a pipeline system to transport the required volumes, and estimating the cost of the pipeline and terminal facilities. A financial model was developed to analyze the effect of the variables involved in calculating a tariff.

Crude oil price at the well head or export point was not considered in the financial analysis because the CTPL will compete on the basis of tariff and improved crude quality not well head price. Refiners will purchase the highest quality crude available at the best price, then add the transportation tariff to determine the delivered cost at the refinery. CTPL's goal is to have the lowest transportation cost adder. Caspian Area crude is high quality, demonstrated by the quantity of capital being invested to bring it to market.

In defining the tariff required to meet the above-described requirements the following values were assumed:

70% to 30% debt to equity ratio, interest on the debt of 7 % to 10%, minimum of 18% internal rate of return (IRR), value added tax (VAT) of 6% in Romania, VAT of 15% in the other countries traversed, income taxes of 19% in Romania, and income taxes of 35% in the other countries traversed.

It is common practice on major projects to negotiate taxes downward. To account for this the calculations were based on a reduced VAT and income tax on the portion of the CTPL in Romania (approximately 50% of the total length) and the full rate on the remainder.

It is probable that during project implementation the 15% VAT and 35% income tax in countries other than Romania can be negotiated downward.

Other factors affecting the tariffs are pipeline throughput volumes, capital expenditures, port charges, fixed operating expenses and variable operating expenses. Reasonable values were selected for these variables and sensitivity analyses were performed with the financial model. The most significant impact is increased volumes early in the project, reduction of value added type taxes, and reduction of capital expenditures.

In order to reduce the initial capital cost and reduce the risk of installing a pipeline that has too much capacity, the proposed pipeline is sized for Project Year 12 projected volumes, rather than Project Year 22 projected vol-

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umes. A parallel line or additional pump stations can be added to handle the volumes projected for Project Year 22 and beyond. Start up is scheduled for Project Year 02.

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It is demonstrated in Section 14 of this Volume 1 that there is sufficient crude oil scheduled for production in the Caspian Region to (1) sustain current export levels, (2) supply the projected CTPL throughputs, and (3) supply the projected Baku to Ceyhan pipeline throughputs. The CTPL is complementary to the Baku to Ceyhan pipeline rather than a competitor. It is also demonstrated in Section 14 that there is sufficient export capacity (pipelines and terminals) at Supsa and Novorossisk to meet current export volumes (tankers) plus supply the projected volumes to the CTPL.

1.3 Pipeline Advantages

The proposed CTPL is designed to be a cost efficient system for transporting crude oil from an existing oil terminal at the Black Sea port of Constantza in Romania to an existing oil terminal at Trieste, Italy. The CTPL will directly supply Caspian Region crude oil to Eastern and Central European refineries at competitive tariffs without the oil having to pass through the sensitive Bosphorus Straits.

Advantages of the proposed 1,375-kilometer (855-mile) pipeline are many, including its route through politically stable countries, illustrated in Figure 1-1.1. The CTPL will provide an important alternate supply to Eastern European refineries currently being served by only Russian crude supplies. The lighter crude, with its lower sulfur content, will be attractive to the environmentally sensitive Eastern and Central European refineries. By interconnecting to existing European pipelines, the CTPL will provide additional stability of crude supply to Central and Western Europe, promoting competition from additional crude source options.

Initial economic analysis indicates that the high quality Caspian crude can be delivered to European refineries at competitive tariffs.

1.4 Opportunities For Further Tariff and Cost**CONFIDENTIAL DATA**

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1.5 Project Development

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1.6 Study Organization

This Final Report presents results developed in accomplishing the objectives set forth at the initiation of this Feasibility Study. The Final Report consists of four (4) Volumes and is structured as follows:

Volume I - Project Overview and Executive Summary presents a summary of the following:

- Sponsor's objectives,
- Project technical characteristics,
- Economics,
- Probable financial structure,
- Provisional tariff structure,
- Legal and regulatory issues,
- Markets to be served by the pipeline system,
- Environmental mitigation strategies, and

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- Other issues of concern to shippers and potential investors such as:
- Stability of governments of countries through which the pipe lines pass
 - Government assurances
 - Insurability
 - Build, own, operate, transfer (BOOT) potential,
 - Security of crude oil supply,
 - Land ownership/ROW concerns.

Volume H - Economic and Financial Analysis presents the economic model, discusses the market issues, discusses the sensitivity analyses performed, the cash flows, profit and loss statements, balance statements, debt service ratios, and revenues.

Volume III - Preliminary Environmental Assessment presents the results of the work relating to identification of the environmental impacts, presentation of mitigating measures required during project implementation, and provides an outline environmental action plan to address the concerns of lenders and regulatory agencies.

Volume IV - Project Execution Plan and Technical Report presents an execution plan in the form of a detail schedule of events, with an explanation of the events. In addition to the execution plan, the results of the calculations done to size the facilities are included, along with process flow diagrams, route maps, and location plans.

Each Volume contains its own Volume Summary.